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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/334,054	06/15/1999	DAVID W. JOHNSON	11381	4885
22827	7590	03/21/2005	EXAMINER	
DORITY & MANNING, P.A.			RAYFORD, SANDRA M	
POST OFFICE BOX 1449			ART UNIT	PAPER NUMBER
GREENVILLE, SC 29602-1449			1772	

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/334,054	JOHNSON, DAVID W.	
	Examiner	Art Unit	
	Sandra M. Nolan	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19,21,22 and 31-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11,14-19,22,31-35 and 37 is/are allowed.
- 6) ☒ Claim(s) 12,13,21 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Pgs. 8 and 15 of specn.</u> |

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DETAILED ACTION

Claims

1. After entry of the 18 January 2005 response ("the last response") to the 14 September 2004 office action ("the last office action"), claims 1-19, 21-22, and 31-37 are pending.

Claims 20 and 23-30 have been cancelled.

Information Disclosure Statement

2. No IDS has been received since the last office action.

Allowable Subject Matter

3. Claims 1-11, 14-19, 22, 31-35 and 37 are allowed.
4. See section 6 of the last office action.

Rejection Maintained

5. The 35 USC 103 rejection of claims 12, 13, 21 and 36 over Misch et al (US 3,637,416) in view of JP 021627A (abstract only), as set out in section 9 of the last office action, is maintained for reasons of record.

Response to Arguments

7. Applicant's arguments filed in the last response have been fully considered but they are not persuasive.

They will be responded to in the order in which they were presented.

On page 7 of the response, applicant argues that Misch is directed to the interposition of a bonding film or layers and a deposit of silica.

The examiner agrees.

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In the paragraph bridging pages 7 and 8, applicant argues that Misch teaches away from the subject matter of applicant's claims 12 and 13 because those claims require colloidal silica particles without any separate binder material. [Applicant's emphasis.] and the bonding layer or film of Misch is an essential part of its article.

However, applicant applies the claimed silica particles using a coating composition. See the penultimate sentence of applicant's abstract (A copy of page 15, which contains the abstract, is enclosed.). Also, applicant describes the application of the claimed silica in the last full sentence on page 8 of the specification (A copy of page 8 is enclosed.), as follows:

"The coating composition includes the colloidal silica particles. . . [in] a carrier which typically serves some other important function in the manufacture of the article."

Based on these passages in the application, it is unclear to the examiner how:

(a) The carrier employed in applicant's coating processes does not serve as a binder for applicant's silica.

(b) The carrier in applicant's coating composition is not an essential part of applicant's article.

In addition, Misch teaches, at col. 4, lines 31-35, that its silica layer is formed when the its first hydrolyzable silicone compound—which is applied just before the silica is generated—is contacted with its second hydrolyzable silicone compound. Thus, the Misch coating process is one "without any separate binder" for the silica because the silica is produced when the two silicone compounds contact each other.

On page 8, applicant argues that the Misch and Japanese teachings must be viewed in their entireties.

The examiner agrees. As the discussion above shows, applicant's invention uses is either conventional coating, which involves a binder, uses coating without a separate binder, which Misch teaches. In either case, the claims are obvious.

The invitation to telephone applicant's attorney, on page 9 of the response, is noted.

However, the issues appear to be clear as stated in the written record, so no interview appears to be called for here.

Final Rejection

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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Conclusion

Any inquiry concerning this communication should be addressed to Sandra M. Nolan-Rayford, at telephone number 571/272-1495. She can be reached Monday through Thursday, from 6:30 am to 4:00 pm, ET.

If attempts to reach the examiner are unsuccessful, contact her supervisor, Harold Pyon, at 571/272-1498.

The fax number for patent application documents is 703/872-9306.


S. M. Nolan-Rayford
Primary Examiner
Technology Center 1700

09334054(20050316)

application of a thin layer of a metal or a metal-containing substance such as aluminum chlorhydrate. Equivalently for the present purposes, the particles 28 could be made partially electrically conductive throughout, as by doping the silica that forms the particles 28 with a metal such as aluminum.

The use of electrically conductive particles 28 allows localized high levels of electrical charge, such as static charge or tribocharge, to be dissipated through conduction along particle-to-particle contacts. This electrostatic discharge (ESD) may be important in certain glove applications. For example, medical gloves may experience local charging for any of several reasons, and the local charging may adversely affect instruments or treatments. Gloves used in clean room facilities may also experience local charging, which may be transferred to the articles being manufactured or interfere with manufacturing operations, in either case adversely affecting the quality of the final product. The present approach provides for a reduction of locally high concentrations of static charge, eventually bleeding the charge to low, harmless levels. This reduction of static charge is accomplished without embedding wires in the glove matrix or other techniques that have been previously proposed but which interfere with the utilization of the glove in service or with its mechanical properties such as its extensibility. In a typical case, electrostatic decay times are reduced from 8-20 seconds to as low as 0.3 seconds with the approach of the invention, measured by the static decay test approach of Federal Test Method Standard 101C Method 4046. Specifications are listed in EIA-541, Mil B-81705C, and NFPA 99.

Figure 5 illustrates a preferred method for preparing an article, such as the glove 20, by the approach of the invention. A mold is provided, numeral 50. A surface of the mold defines at least a portion of the surface of the article to be manufactured, and in the preferred case defines the outside surface 24 of the glove 20. The mold for a glove is a shape of the human hand, known as a "former", made of glass, metal, porcelain, or other suitable material.

A coating composition is prepared, numeral 52. The coating composition includes the colloidal silica particles 28, mixed into a carrier which typically serves some other important function in the manufacture of the article. The colloidal silica

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ELASTOMERIC ARTICLE WITH FINE COLLOIDAL SILICA
SURFACE TREATMENT, AND ITS PREPARATION

ABSTRACT OF THE DISCLOSURE

A surface-modified article is formed of an elastomeric matrix, such as a glove shape, and a plurality of fine silica particles affixed to at least a portion of the surface of the matrix, the outside surface in the case of the glove. The fine silica particles increase the coefficient of friction of the article surface. The fine silica particles may also be made electrically conductive, so that static charge at the surface of the article is dissipated. The silica particles are applied by mixing them into a coating composition, applying the coating composition to the surface of a mold, and solidifying a flowable elastomeric composition against the coated surface. The coating composition may include a coagulant or a parting agent.

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